

HASP Monthly Status Report – October 2016

North Carolina Infrasound

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1 **Synopsis**

- Discovery of unique signals.
- Collaboration with the University of Bridgeport team.

2 **Activity Summary**

The team has been investigating possible origins of unique signals in the gondola data (Figure 1). Because these signals are not in the flight ladder data, the initial thought was that they could be attributed to electrical noise. The sudden start and stop of the signals further supported this hypothesis. After thinking through other known activity on the gondola, our team contacted the Bridgeport team as they had several parts that were designed to make sudden movements. We hope to correlate the movement of their servos to signals in our data. Progress is also being made to compare the difference in sensitivity between the ladder and gondola equipment. This will help conclude whether signals on the gondola are real or electrical interference.

A new casing has been placed on the RefTek, and according to Trimble it is again in working condition. Once we receive the RefTek back in Chapel Hill, we will test it with our equipment to confirm.

3 **Issues Encountered**

Some signals in the gondola data are not recorded in the flight ladder data.

4 Milestones Achieved

Progress has been made in our collaboration with the University of Bridgeport team.

5 Figures

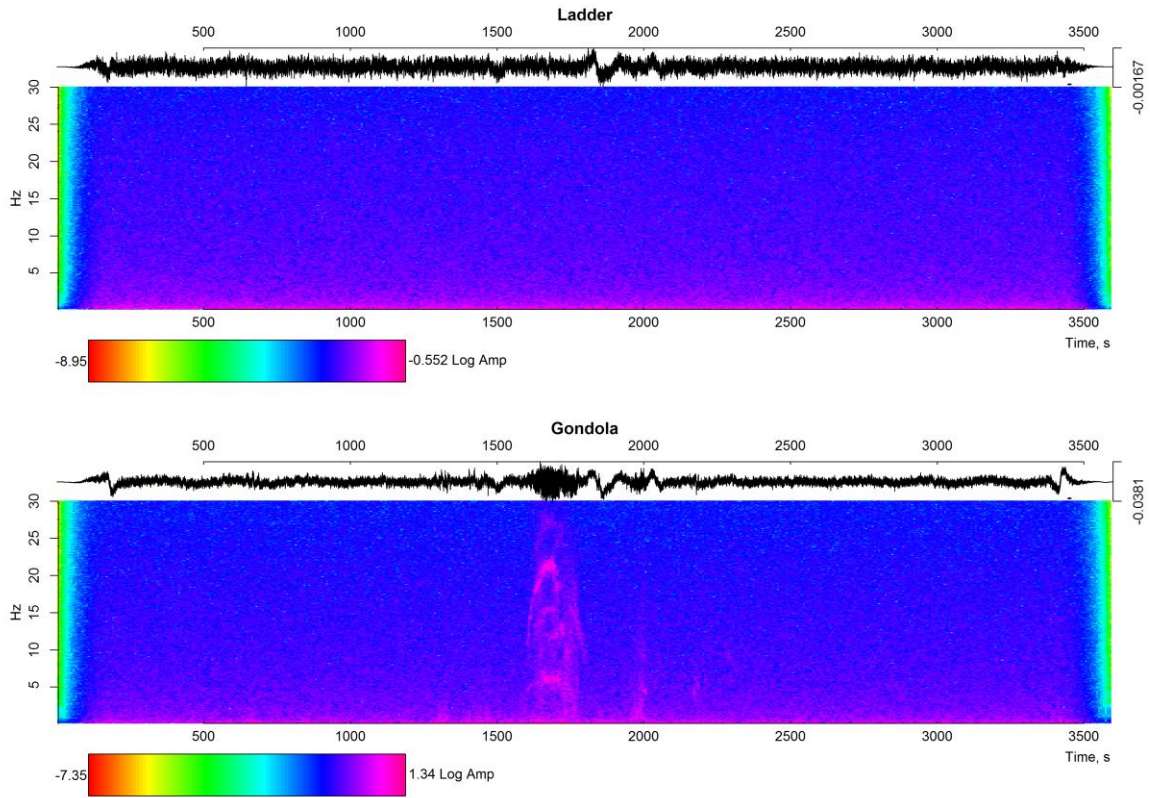


Figure 1. Spectrograms for the flight ladder station (top) and the gondola station (bottom) over the course of an hour. The signal in question is at about 1700s.

6 Team

Name	Male/Female	Ethnicity	Role	Affiliation
Jacob F. Anderson	Male	Caucasian	Student Team Member	Boise State University
Jordan W. Bishop	Male	Caucasian	Student Team Member	UNC-Chapel Hill
Daniel C. Bowman	Male	Caucasian	Outside Advisor	UNC/Sandia National Lab
Ethan C. Dinwiddie	Male	Caucasian	Student Team Member	UNC-Chapel Hill
Jonathan M. Lees	Male	Caucasian	Faculty Advisor	UNC-Chapel Hill
Rebecca L. Rodd	Female	Caucasian	Team Member	UNC-Chapel Hill
Timothy J. Ronan	Male	Caucasian	Student Team Member	UNC-Chapel Hill
Kayla T. Seiffert	Female	Caucasian	Student Leader	UNC-Chapel Hill